

Serial No.: 09/853,372  
Atty. Docket No.: 01-704-US

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of claims:**

1-28. (canceled)

29. (original) A method of making a quinoline insoluble-free and ash-free coal tar pitch having a desired softening point, comprising the steps of: feeding a feed coal tar pitch having an initial softening point in the range of 70°C to 160°C into a processing vessel, wherein said processing vessel is heated to a temperature in the range of 300°C to 600°C and wherein a pressure inside said processing vessel is 5 Torr or less; obtaining a distillate from said processing vessel, said distillate having a softening point in the range of 25°C to 60°C and being quinoline insoluble-free and ash-free; heat treating said distillate at a temperature in the range of 350°C to 595°C for between five minutes and forty hours; and distilling the heat treated distillate to obtain a pitch having the desired softening point.

30. (original) A method according to claim 29, said feeding step comprising introducing said feed coal tar pitch into a wiped film evaporator, said wiped film evaporator comprising said processing vessel.

31. (original) A method according to claim 29, said feeding step comprising introducing said feed coal tar pitch into a thin film evaporator, said thin film evaporator comprising said processing vessel.

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32. (original) A method according to claim 29, said feeding step comprising introducing said feed coal tar pitch into a conventional distillation apparatus, said conventional distillation apparatus comprising said processing vessel.

33. (original) A method according to claim 29, wherein said heat treated distillate has a softening point in the range of 60°C to 110°C.

34. (original) A method of making a mesophase coal tar pitch, comprising of the steps of: feeding a feed coal tar pitch having a softening point in the range of 70°C to 160°C into a processing vessel, wherein said processing vessel is heated to a temperature in the range of 300°C to 600°C and wherein a pressure inside said processing vessel is 5 Torr or less; obtaining a distillate from said processing vessel, said distillate having a softening point in the range of 25°C to 60°C and being quinoline insoluble-free and ash-free; and heat treating said distillate at a temperature in the range of 370°C to 595°C for between three and forty hours.

35. (original) A method according to claim 34, said feeding step comprising introducing said feed coal tar pitch into a wiped film evaporator, said wiped film evaporator comprising said processing vessel.

36. (original) A method according to claim 34, said feeding step comprising introducing said feed coal tar pitch into a thin film evaporator, said thin film evaporator comprising said processing vessel.

37. (original) A method according to claim 34, said feeding step comprising introducing said feed coal tar pitch into a conventional distillation apparatus, said conventional distillation apparatus comprising said processing vessel.

38. (original) A method of making a quinoline insoluble-free and ash-free coal tar pitch, comprising of the steps of: feeding a feed coal tar pitch having a softening point in the

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range of 70°C to 160°C into a first processing vessel, wherein said first processing vessel is heated to a temperature in the range of 300°C to 600°C and wherein a pressure inside said first processing vessel is 5 Torr or less; obtaining a distillate from said first processing vessel, said distillate having a softening point in the range of 25°C to 60°C and being quinoline insoluble-free and ash-free; heat treating said distillate at a temperature in the range of 350°C to 595°C for between five minutes and forty hours; distilling the heat treated distillate to obtain a pitch having a desired softening point; feeding said pitch having a desired softening point into a second processing vessel, wherein said second processing vessel is heated to a temperature in the range of 300°C to 600°C; and withdrawing an output coal tar pitch from said second processing vessel.

39. (original) A method according to claim 38, wherein said first processing vessel and said second processing vessel are the same vessel.

40. (original) A method according to claim 39, wherein said first and second processing vessel is a wiped film evaporator.

41. (original) A method according to claim 38, wherein said first processing vessel comprises a wiped film evaporator.

42. (original) A method according to claim 38, wherein said second processing vessel comprises a wiped film evaporator.

43. (original) A method according to claim 39, wherein said first and second processing vessel is a thin film evaporator.

44. (original) A method according to claim 38, wherein said first processing vessel comprises a thin film evaporator.

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45. (original) A method according to claim 38, wherein said second processing vessel comprises a thin film evaporator.

46. (original) A method according to claim 39, wherein said first and second processing vessel are comprised of a conventional distillation apparatus.

47. (original) A method according to claim 38, wherein said first processing vessel further comprises a conventional distillation apparatus.

48. (original) A method according to claim 38, wherein said second processing vessel further comprises a conventional distillation apparatus.

49-80. (canceled)

81. (original) A method of making a quinoline insoluble-free and ash-free hydrocarbon mixture pitch having a desired softening point, comprising the steps of feeding a feed hydrocarbon mixture pitch having an initial softening point in the range of 70°C to 160°C into a processing vessel, wherein said processing vessel is heated to a temperature in the range of 300°C to 600°C and wherein a pressure inside said processing vessel is 5 Torr or less; obtaining a distillate from said processing vessel, said distillate having a softening point in the range of 25°C to 60°C and being quinoline insoluble-free and ash-free; heat treating said distillate at a temperature in the range of 350°C to 595°C for between five minutes and forty hours; and distilling the heat treated distillate to obtain a pitch having the desired softening point.

82. (original) A method according to claim 81, said feeding step comprising introducing said feed hydrocarbon mixture pitch into a wiped film evaporator, said wiped film evaporator comprising said processing vessel.

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83. (original) A method according to claim 81, said feeding step comprising introducing said feed hydrocarbon mixture pitch into a thin film evaporator, said thin film evaporator comprising said processing vessel.

84. (original) A method according to claim 81, said feeding step comprising introducing said feed hydrocarbon mixture pitch into a conventional distillation apparatus, said conventional distillation apparatus comprising said processing vessel.

85. (original) A method according to claim 81, wherein said heat treated distillate has a softening point in the range of 60°C to 110°C.

86. (original) A method according to claim 81, said feed hydrocarbon mixture pitch comprising a mixture of coal tar pitch and petroleum pitch.

87. (original) A method according to claim 86, said feed hydrocarbon mixture pitch comprising at least 50% coal tar pitch.

88. (original) A method of making a mesophase hydrocarbon mixture pitch, comprising of the steps of: feeding a feed hydrocarbon mixture pitch having a softening point in the range of 70°C to 160°C into a processing vessel, wherein said processing vessel is heated to a temperature in the range of 300°C to 600°C and wherein a pressure inside said processing vessel is 5 Torr or less; obtaining a distillate from said processing vessel, said distillate having a softening point in the range of 25°C to 60°C and being quinoline insoluble-free and ash-free; and heat treating said distillate at a temperature in the range of 370°C to 595°C for between three and forty hours.

89. (original) A method according to claim 88, said feeding step comprising introducing said feed hydrocarbon mixture pitch into a wiped film evaporator, said wiped film evaporator comprising said processing vessel.

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90. (original) A method according to claim 88, said feeding step comprising introducing said feed hydrocarbon mixture pitch into a thin film evaporator, said thin film evaporator comprising said processing vessel.

91. (original) A method according to claim 88, said feeding step comprising introducing said feed hydrocarbon mixture pitch into a conventional distillation apparatus, said conventional distillation apparatus comprising said processing vessel.

92. (original) A method according to claim 88, said feed hydrocarbon mixture pitch comprising a mixture of coal tar pitch and petroleum pitch.

93. (original) A method according to claim 92, said feed hydrocarbon mixture pitch comprising at least 50% coal tar pitch.

94. (original) A method of making a quinoline insoluble-free and ash-free hydrocarbon mixture pitch, comprising of the steps of: feeding a feed hydrocarbon mixture pitch having a softening point in the range of 70°C to 160°C into a first processing vessel, wherein said first processing vessel is heated to a temperature in the range of 300°C to 600°C and wherein a pressure inside said first processing vessel is 5 Torr or less; obtaining a distillate from said first processing vessel, said distillate having a softening point in the range of 25°C to 60°C and being quinoline insoluble-free and ash-free; heat treating said distillate at a temperature in the range of 350°C to 595°C for between five minutes and forty hours; distilling the heat treated distillate to obtain a pitch having a desired softening point; feeding said pitch having a desired softening point into a second processing vessel, wherein said second processing vessel is heated to a temperature in the range of 300°C to 600°C; and withdrawing an output hydrocarbon mixture pitch from said second processing vessel.

95. (original) A method according to claim 94, wherein said first processing vessel and said second processing vessel are the same vessel.

**REPLY UNDER 37 C.F.R. §1.116 -  
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96. (original) A method according to claim 95, wherein said first and second processing vessel is a wiped film evaporator.

97. (original) A method according to claim 94, wherein said first processing vessel comprises a wiped film evaporator.

98. (original) A method according to claim 94, wherein said second processing vessel comprises a wiped film evaporator.

99. (original) A method according to claim 95, wherein said first and second processing vessel is a thin film evaporator.

100. (original) A method according to claim 94, wherein said first processing vessel comprises a thin film evaporator.

101. (original) A method according to claim 94, wherein said second processing vessel comprises a thin film evaporator.

102. (original) A method according to claim 95, wherein said first and second processing vessel are comprised of a conventional distillation apparatus.

103. (original) A method according to claim 94, wherein said first processing vessel further comprises a conventional distillation apparatus.

104. (original) A method according to claim 94, wherein said second processing vessel further comprises a conventional distillation apparatus.

105. (original) A method according to claim 94, said feed hydrocarbon mixture pitch comprising a mixture of coal tar pitch and petroleum pitch.

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106. (original) A method according to claim 105, said feed hydrocarbon mixture pitch comprising at least 50% coal tar pitch.

107-162. (canceled)